Share.TEC Repository System Interface

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Abstract. The focus of this paper will be the user interface of the Share.TEC repository system for Teacher Education. The interface has been carefully examined by the author of this paper during the numerous testing iterations and it will be presented in this paper with a number of useful recommendations and suggestions which were reported during the evaluation of the system. Emphasis was put on the interaction with the user and his or her expectations. The analysis and examples in this paper might be very useful for the developers of the future releases of the Share.TEC repository system as well as for those who intend to develop similar systems.

Keywords: teacher education, repository, user interface, prototype testing

1 Introduction

It has not been many years since the first Repository systems were introduced in the educational world and as of the moment of writing this paper such systems are steadily gaining popularity. Many educational specialists and learners are attracted by the easy-to-use and fast repositories. They are quite often preferred search tools due to the strictly specialized areas that they operate within. That limits the possibilities for many fake or irrelevant search results which might and often are produced by common search tool. Specialized content, well structured data as well as richness of resources are amongst the most well-known advantages of the repository systems over other common search tools. Other very important feature associated with success and popularity of a repository system is its user interface. It should be not only intuitional and simple but should also present all the functionalities needed by the target users in order to fulfill their needs.

The focus of this paper will be the user interface of the Share.TEC repository system for Teacher Education. The interface has been carefully examined by the author of this paper during the numerous testing iterations and it will be presented in this paper with a number of useful recommendations and suggestions which were reported during the evaluation of the system. Emphasis was put on the interaction with the user and his or her expectations. The analysis and examples in this paper might be very useful for the developers of the future releases of the Share.TEC repository system as well as for those who intend to develop similar systems.

The body of this paper starts with Share.TEC functional description and review of the previous testing iterations. The paper continues with actual observations, collaboration experience with the system via its web-based interface

as well as some recommendations and suggestions regarding the interface. Finally, the paper will end with a conclusion, where future steps and summary of the work done will be given.

2 Share.TEC functional description and prerequisites

In the beginning of 2010 the first prototype of Share.TEC (www.share-tec.eu) repository system was developed [1]. The system is designed as a highly visible and functional portal [2] which is supposed to give access to a great variety of Teacher Education resources. At the center of the Share.TEC system is the repository system which stores metadata for TE resources. The resources are described and classified in detail, which allows the system to recommend certain resources to different users depending on their profiles. Efficient and comprehensive search option, reasoning abilities and many more is expected from the Share.TEC system.

The development of the Share.TEC repository system went through several development and testing phases. The first releases were tested primarily by a small group of specialist which included the author of this paper. Later and more stable releases were presented to a broader audience for recording of feedback and recommendations. Various assessment methods which could help the testing phase were evaluated. Think Aloud sessions [3] and Product Reaction Cards [4] turned to be the most suitable approaches. Their usage proved to be useful as many errors and recommendations were presented. Part of the results of those testing iterations will be presented also here.

The requirements and specifications of the Share.TEC repository system were developed in accordance with a set of scenarios and use cases and the main system functionalities might be divided as follows:

- User account and profile management;
- Searching and navigation through the system;
- Content creation and assessment functionalities;
- Collaboration with other system users via a group.

Except for the content creation, all other listed functionalities can be tested via the web-base interface of the system. In order to create content in the system the user will need an additional tool which will stay out of the discussions in this paper.

Prior to any testing phase no manuals or tutorials were provided. The only information received was the internet link to the Share.TEC prototype, brief description of use cases and assessment directions. That was true for all test users. The assessment directions included description of the quality attributes against which the Share.TEC repository system and its interface were being tested. Such attributes were utility, usability and desirability [5]. Utility refers to the design's functionalities and answers the question – do the system and its interface do what users need, while usability is defined as the extent to which software can be used by specified users to achieve specified goals with effectiveness, efficiency, satisfaction in a specified context of use. Desirability was considered as the necessary prerequisite for the casual user to continue to work with the system after initial encounter with it. That is what makes desirability even more important than usability and utility for the testing phases.

The testing of the system as well as the interface documenting will go

through several basic steps, which correspond to the above-mentioned functionalities. After creation of a new user in the system, different types of search are performed and assessment of already existing resources in the system is done. Subscription to a group and communicating with members of the group then follows.

3 Collaboration experience with the system and its interface

This section presents the Share.TEC repository system web interface as it had been seen in the last testing phase before writing of the paper. The description will follow the system's functionalities presented above. Along with the interface presentation, recommendations and suggestions for future development extracted from the numerous tests by different test users will be included. The most controversial points from the previous stages will also be mentioned.

Initial steps with the system's interface are associated with the creation of an account because with guest account the user is not able to do much in the system. Registration of the new user goes smoothly and is quite quick. All attributes are easy to select values for. The fields are rightly positioned with easy to read and distinguishable font colors. User information is properly organized and is narrowed to the really needed data for successful collaboration with the system. That makes the first impression of the system quite positive and raises the level of desirability towards the system during the phase of first encounter. Minor issues reported for this phase included the recommendation to add more list boxes for fields like birth data and education for instance.

In less than a minute the user is logged into the system and can view the registered user menu. It is well structured and lacks the burden of the huge menus where it is often hard to find what you are looking for – Fig. 1.

Fig. 1 shows also the user information screen, which gives the possibility to view and change or create personal information, messages and posts. As can be seen from the screenshot the interface layout is well organized and suggests easy and intuitional work with the system. Recommendations associated with this screenshot and the system as a whole, include the possibility of changing the color scheme for the user interface. It is true that the colors are the adequately chosen in order to assure easily to read and distinguishable words. But there is no doubt that a common option like changing of interface layout and colors in order to suit the user's preferences would lever up the desirability towards the repository system's interface.

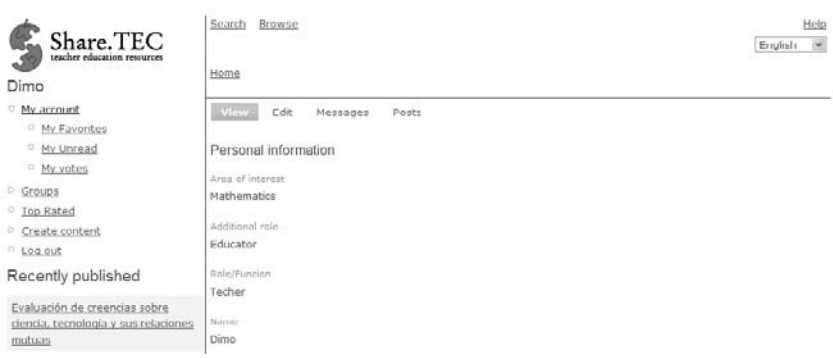

Fig. 1. Share.TEC main menu screenshot.

Performing a search is the next and central issue for the assessment of the system's interface. Two search modes are available – simple and advanced. Simple search mode resembles the Google search with the minor difference that the Share.TEC simple search layout seems a little bit empty with all the information transferred to the left. Advanced search option, however looks just fine. Advanced search fields are rightly chosen and more than enough to assure and accurate search in a huge database.

Search results in Share.TEC system are presented in an easy-to-view way with practical and useful features included, see Fig. 2. Such feature for instance is the possibility to filter the results by format, language, author and other attributes.

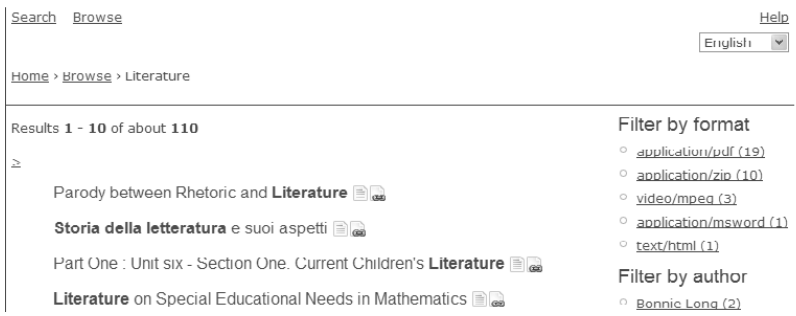

Fig. 2. Share.TEC search results.

If the user chooses to check the description of a resource before reading it from the original location he or she will not stay disappointed. Detailed information is available for all of the resources with the most common and often needed attributes as author and summery at the top of the description. "Search Similar By" option is available for all attributes of a chosen resource and can save a lot of time to the user.

Amongst the most discussed by the test users issues was that of the language translations. The interface has been translated in several languages and the users are easily able to switch to a desired language. That functionality works fine. A little bit irritating for most of the users might be the lack of translation for sources which titles are in a language different from the chosen by the user. Those titles are shown in the search results, no matter of their language, Fig. 2. Obviously the system developers have avoided automatic translation due to numerous possible errors and misunderstandings, which might be accepted as a solution for the first prototype. In a future release, though, the language issue might be more closely examined and a better solution might be found.

4 Conclusions

The overall impression of the Share.TEC repository system's interface and its usage is more than satisfactory. All of the expected functionalities worked quite fine. The web-based system interface is easy to use, robust, fast and reliable. It offers all the needed features of a repository system with the most important of them placed ahead and easily reachable.

This paper puts an end to one of the consecutive stages of development and testing. The project stage is considered successful. New release of the Share.

TEC repository system is now foreseen and now with a stable and easy-to-use interface a larger number of teachers is expected to get involved in the enriching of the resources database of Share.TEC repository system.

Acknowledgements. This paper is financed by project: Creative Development Support of Doctoral Students, Post-Doctoral and Young Researches in the Field of Computer Science, BG 051PO001-3.3.04/13, European Social Fund 2007–2013, Operational Programme "Human Resources Development".

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